



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of
Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

555 Cordova Street
Anchorage, Alaska 99501
Phone: 907.269.7503
Fax: 907.269.7649
dec.alaska.gov

File: 2245.38.009

August 26, 2013

Mr. Michael Larson
500 East Swanson Drive, Suite #7
Wasilla, AK. 99654

Re: Decision Document; Pioneer Service Station
Cleanup Complete Determination

Dear Mr. Larson;

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Pioneer Service Station, located at 1880 South Glenn Highway in Palmer, Alaska. The legal description is Lot 2, Rambler Subdivision. Based on the information provided to date, it has been determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment and this site will be closed.

This decision is based on the administrative record for Pioneer Service Station, which is located in the offices of the ADEC in Anchorage, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Cleanup Complete determination.

Introduction

Site Name and Location:

Pioneer Service Station
1880 South Glenn Highway
Palmer, AK

Name and Mailing Address of Contact Party:

Mr. Michael Larson
500 East Swanson Drive, Suite #7
Wasilla, AK. 99654

ADEC Site Identifiers

File: 2245.38.009

Hazard ID: 1251

Regulatory authority under which the site is being cleaned up:

18 AAC 75

Background

The former Pioneer Service Station has operated as an automobile fueling and service center since the mid 1970's. Two 10,000-gallon underground storage tanks (USTs) were removed from the property in 1996. A small amount of contaminated soil was excavated during the UST removals and after confirmation samples indicated contaminated soil was no longer present, the site was closed. For more information on the removal of these USTs, see ADEC File #2245.26.025 for Awesome Auto Inc.

A new, double walled UST was then installed in 1996 and is currently in operation. The facility is currently named The Pit Stop, but is referred to as K&A Auto on ADEC's UST Database with Facility ID 2340.

As part of the former service center, a sub-grade oil/lube pit with a concrete floor was present that allowed technicians to work underneath automobiles without the need for a hydraulic lift. A floor drain was present in the oil/lube pit that discharged to the subsurface immediately below the pit. In 1991, soil samples were collected below the concrete floor of the pit that contained up to 15,000 milligrams per kilogram (mg/kg) total petroleum hydrocarbons, 0.4 mg/kg tetrachloroethylene, and 0.2 mg/kg benzene. A duplicate sample contained significantly lower concentrations of contaminants. Additionally, a large area of petroleum stained soil was identified on the property in 1992.

A separate, at-grade floor drain was connected to a log crib septic outfall that was also investigated in 1992. This floor drain was connected to the Palmer sanitary sewer in the mid 1980's. The former log crib outfall is present on Lot 1 of the Rambler Subdivision and additional details can be found under ADEC File #2245.38.041.

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for diesel range organics (DRO), gasoline range organics (GRO), residual range organics (RRO), volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX), polynuclear aromatic hydrocarbons (PAHs) and metals. Earlier samples had been analyzed for total petroleum hydrocarbons, which is approximately equal to the sum of the hydrocarbon fractions DRO, GRO, and RRO. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified in soil:

- Diesel Range Organics (DRO)
- Tetrachloroethylene (PCE)
- Benzene

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2, Migration to Groundwater Pathway for the Under 40 inch Zone.

<u>Contaminant</u>	<u>Site Cleanup Level (mg/kg)</u>
• Diesel Range Organics (DRO)	250
• Tetrachloroethylene	0.024
• Benzene	0.025

Site Characterization Activities

In 2013, two boreholes were advanced at the former oil/lube pit to evaluate the nature and extent of contamination identified in the initial samples from 1991. The location of the former pit was identified by the rectangle on the shop floor where the pit had been filled and paved with concrete. Three soil samples were collected from the two boreholes between 5 and 12.5 feet below ground surface (bgs) based on field screening conducted with a photo ionization detector. The boreholes reached a maximum depth of 20 feet bgs. Tetrachloroethylene was detected up to 0.0182 mg/kg and DRO was detected up to 66.4 mg/kg. Benzene was not detected. The only contaminants detected above cleanup levels were arsenic and chromium, which were detected at concentrations considered representative of background conditions and are not attributed to contamination at the site.

The large area of petroleum stained soil was excavated to a depth of 18-24 inches bgs in 1992. Approximately 20 cubic yards of stained soil was excavated and is no longer onsite, however the final disposition of this soil is not detailed in the environmental record. Confirmation soil samples collected from the bottom of the stained soil excavation contained DRO (reported as Extractable Petroleum Hydrocarbons) up to 173 mg/kg.

Groundwater was not encountered in the boreholes and all surrounding properties are reportedly connected to the City of Palmer water and wastewater utility.

Cumulative Risk Calculation

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk at this site.

Exposure Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Contaminated surface soil is not present at the site
Sub-Surface Soil Contact	De Minimis Exposure	Subsurface soil samples collected in 2013 did not indicate the presence of contamination; samples collected in 1991 were from an area that is now approximately 8 feet bgs and covered by concrete.
Inhalation – Outdoor Air	De Minimis Exposure	Contaminant concentrations are below inhalation cleanup levels and any remaining contamination is in the subsurface and covered by clean soil and concrete.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Contaminant concentrations are below inhalation cleanup levels and any remaining contamination is in the subsurface and covered by clean soil and concrete.
Groundwater Ingestion	Pathway Incomplete	Groundwater at this site was not impacted by contaminants.
Surface Water Ingestion	Pathway Incomplete	Surface water is not utilized as a drinking water source in this area.
Wild Foods Ingestion	Pathway Incomplete	Wild foods are not collected in this area.
Exposure to Ecological Receptors	Pathway Incomplete	Ecological receptors are not present at this site.

Notes to Table 1: “De-minimis exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. “Pathway incomplete” means that in ADEC’s judgment contamination has no potential to contact receptors. “Exposure controlled” means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

Based on the information available, ADEC has determined no further assessment or cleanup action is required. There is no longer a risk to human health or the environment, and this site will be designated as closed on the Department’s database.

Although a Cleanup Complete determination has been granted, ADEC approval is required for off-site soil disposal in accordance with 18 AAC 75.325(i). It should be noted that movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.

This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 -18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions about this closure decision, please contact ADEC Project Manager William O'Connell at (907) 269-3057.

Approved By,



Bill O'Connell
Environmental Program Manager